## <u>Claims</u>

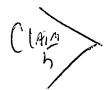
1. A method of calculating routes for sending user data packets via information handling devices which are interconnected in a communications network, comprising

including in each of said user data packets, destination address information conforming to an addressing convention of any one of two or more different independent protocol suites,

always calculating said route for a user data packet using a route calculation algorithm corresponding to the same routing protocol, chosen from an arbitrary protocol suite, regardless of the addressing convention to which the user data packet conforms,

said route being calculated without converting the destination information from the addressing convention to which it conforms to another addressing convention.

- 2. The method of claim 1 wherein there are exactly two said protocol suites.
- 3. The method of claim 1 or 2 further comprising sending to said information handling devices, link state packets conforming to said routing protocol, and calculating said route based on information contained in said link state packets.
- 4. The method of claim 1 or 2 wherein said routing protocol comprises OSI IS-IS routing protocol.



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 $\begin{array}{c} 11 \\ 12 \\ 13 \end{array}$ 

data packets via information handling devices which are interconnected in a communications network, said information handling devices including (a) single-protocol information handling devices capable of recognizing and forwarding only user data packets which conform to a single protocol suite, and (b) multi-protocol information handling devices capable of recognizing and forwarding user data packets which conform to any one of two or more protocol suites, comprising

using a routing protocol to automatically predetermine at which information handling devices to encapsulate and to decapsulate a given packet.

handling devices are organized in areas and all of said information handling devices within a single said area are at least capable of recognizing and forwarding user data packets which conform to the same one of said protocol suites.

The method of claim wherein the one of said protocol suites for which the information handling devices of one of said areas are capable differs from the one of said protocol suites for which the information handling devices of another one of said areas are capable.

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1 8. The method of claim 5 wherein a given area may include (a) single-protocol information handling devices 2 capable of recognizing and forwarding only user data packets which conform to a first protocol suite, (b) single-protocol information handling devices capable of recognizing and forwarding only user data packets which conform to a second different protocol suite, and (c) at least one multi-protocol information handling device capable of 9 recognizing and forwarding user data packets which conform to at least said first and second protocol suites. 10 9. The method of claim 8 wherein one of said 1 multi-protogol information handling devices is capable of 2 recognizing and forwarding user data packets which conform 3 4

to every protocol suite that is used by any other 5 \( \sinformation \) handling device in said given area.

1 10. The method of claim 1 2 of said protocol suites comprises the TCP/IP protocol suite 3 and another of said protocol suites comprises the OSI protocol suite.

The method of claim \$ 5, 7, 8 or 8 wherein there are exactly two of said protocol suites.

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The method of claim 11 wherein one of said protocol suites comprises TCP/IP and the other of said protocol suites comprises OSI.

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1	18. The method of claim 5, 7, 8 or 8 further
2	comprising
3	sending to said information handling devices, link
4	state packets conforming to said one of said routing
5	protocols, and
6	calculating said route based on information
7	contained in said link state packets.
1	10 14. The method of claim 16 further comprising
2	sending to said information handling devices, link
3	state packets conforming to said one of said routing
4	protocols, and
5	calculating said route based on information
6	contained in said link state packets.
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1	16 15. The method of claim 11 further comprising
2	sending to said information handling devices, link
3	state packets conforming to said one of said routing
4	protocols, and
5	calculating said route based on information
6	contained in said link state packets.
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1	19 16. The method of claim 12 further comprising
2	sending to said information handling devices, link
3	state packets conforming to said one of said routing
4	protocols, and
5	calculating said route based on information

contained in said link state packets.

The method of claim 5, 7, 8 or 8 wherein said routing protocol used to automatically predetermine at which information handling devices to encapsulate and to decapsulate a given packet comprises OSI IS-IS routing protocol.

The method of claim 10 wherein said routing protocol used to automatically predetermine at which information handling devices to encapsulate and to decapsulate a given packet comprises OSI IS-IS routing protocol.

17. The method of claim 11 wherein said routing protocol used to automatically predetermine at which information handling devices to encapsulate and to decapsulate a given packet comprises OSI IS-IS routing protocol.

The method of claim 12 wherein said routing protocol used to automatically predetermine at which information handling devices to encapsulate and to decapsulate a given packet comprises OSI IS-IS routing protocol.

21. A method of enabling user data packets to be forwarded from one local area network to another by a device which is capable of acting as a router to recognize and forward user data packets which conform to a first protocol suite and is capable of acting as a bridge to recognize and forward user data packets which conform to at least a second protocol suite, said method comprising

for a user data packet which conforms to said first protocol suite and is addressed to a single address which is not an address of the device, causing the device to act as a bridge rather than as a router.

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